

#### ABSTRACT OF THE DISCLOSURE

A method of leaching zinc from a zinc concentrate comprising leaching a zinc concentrate in an aqueous solution containing free sulfuric acid and ferric ions, whereby elemental sulfur is deposited on the zinc concentrate, and grinding the zinc concentrate under atmospheric pressure in the aqueous solution to provide particles of the zinc concentrate having surfaces, wherein the elemental sulfur and other by-products which form on the surfaces of the particles of the zinc concentrate are stripped by the grinding.